



SEQUENCE LISTING

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Yu, Dong
Agrawal, Sudhir

<120> Modulation of Immunostimulatory Activity of Immunostimulatory
Oligonucleotide Analogs By Positional Chemical Changes

<130> HYB-005US5 (1006.006)

<140> US 10/694,586

<141> 2003-10-27

<150> US 09/965,116

<151> 2001-09-26

<150> US 09/712,898

<151> 2000-11-15

<150> US 60/235,452

<151> 2000-09-26

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<223> g = C3-Linker

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c at position 5 = C3-Linker

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<223> cc at positions 1 & 2 = C3-Linker

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<223> c at positions 2 & 3 =
2'-O-Methoxyethylribonucleoside
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 <223> c = beta-L-Deoxynucleoside

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c at position 5 = beta-L-Deoxynucleoside

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c at position 15 = beta-L-Deoxynucleoside

<400> 84
ctatctgacg ttctctgt 18

<210> 85
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9, 10
<223> c at position 9 = beta-L-Deoxynucleoside
g at position 10 = beta-L-Deoxynucleoside

<400> 85
ctatctgacg ttctctgt 18

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 7
<223> g = beta-L-Deoxynucleoside

<400> 86
ctatctgacg ttctctgt 18

<210> 87
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 12
<223> t = beta-L-Deoxynucleoside

<400> 87
ctatctgacg ttctctgt 18

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> (1)...(18)
<223> all nucleotides = beta-L-deoxynucleoside

<400> 88
ctatctgacg ttctctgt 18

<210> 89
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 5
<223> c = 2'-O-Propargyl-ribonucleoside

<400> 89
ctatctgacg ttctctgt 18

<210> 90
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 15
<223> c = 2'-O'Propargyl-ribonucleoside

<400> 90
ctatctgacg ttctctgt 18

<210> 91
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = 1',2'-Dideoxyribose
c at position 5 = 1',2'-Dideoxyribose

<400> 91
cctactagcg ttctcatc 18

<210> 92
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = C3-Linker
c at position 5 = C3-Linker

<400> 92
cctactagcg ttctcatc 18


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<210> 93
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = 3'-methoxyribonucleoside
      c at position 5 = 3'-methoxyribonucleoside

<400> 93
cctactagcg ttctcatc                                     18

<210> 94
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5, 12
<223> a at position 4 = 1',2'-Dideoxyribose
      c at position 5 = 1',2'-Dideoxyribose
      t at position 12 = 2'-methoxyribonucleoside

<400> 94
cctactagcg ttctcatc                                     18

<210> 95
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<400> 95
cctactaggc ttctcatc                                     18

<210> 96
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 10
<223> g = 7-deazaguanine

<400> 96
ctatctgacg ttctctgt                                     18

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<210> 97
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 9
 <223> g = 7-deazaguanine

<400> 97
 ctatctgagc ttctctgt

18

<210> 98
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<400> 98
 tctcccagcg tgcgcat

18

<210> 99
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 10,14
 <223> g at positions 10 and 14 = 7-deazaguanine

<400> 99
 tctcccagcg tgcgcat

18

<210> 100
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 5
 <223> c = C3-Linker

<221> modified_base
 <222> 10
 <223> g = 7-deazaguanine

<400> 100
ctatctgacg ttctctgt 18

<210> 101
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 10
<223> g = 6-thioguanine

<400> 101
ctatctgacg ttctctgt 18

<210> 102
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> g = 6-thioguanine

<400> 102
ctatctgagc ttctctgt 18

<210> 103
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> c = 4-thiouridine

<400> 103
ctatctgacg ttctctgt 18

<210> 104
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 5

<223> c = 1,2-Dideoxyribose

<221> modified_base

<222> 9

<223> c = 4-thiouridine

<400> 104

ctatctgacg ttctctgt

18

<210> 105

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 9

<223> c = Ara-C

<400> 105

ctatctgacg ttctctgt

18

<210> 106

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 10

<223> c = Ara-C

<400> 106

ctactctgac cttctctgt

19

<210> 107

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 9

<223> c = 1',2'-Dideoxyribose

<400> 107

ctatctgacg ttctctgt

18

<210> 108

<211> 18

<212> DNA

<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 8
<223> a = 1',2'-Dideoxyribose

<400> 108
ctatctgacg ttctctgt 18

<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 6
<223> t = 1',2'-Dideoxyribose

<400> 109
ctatctgacg ttctctgt 18

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4
<223> t = 1',2'-Dideoxyribose

<400> 110
ctatctgacg ttctctgt 18

<210> 111
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 11
<223> t = 1',2'-Dideoxyribose

<400> 111
ctatctgacg ttctctgt 18

<210> 112
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 13

<223> c = 1',2'-Dideoxyribose

<400> 112

ctatctgacg ttctctgt

18